

REMARKS

Reconsideration of the above-identified application in view of the following remarks is respectfully requested.

Enclosed herewith is an Information Disclosure Statement submitting a reference that was cited in a communication in a counterpart foreign application.

Although the Office Action dated March 5, 2003 states that claims 1-16 are allowable, the Examiner indicated that the claims of the above-identified application may be unpatentable in view of U.S. Patent No. 6,485,491 to Farris et al.

It is respectfully submitted that claims 1-17 are allowable. Specifically, claim 1 recites an apparatus including a longitudinal member connectable with a bone portion. A fastener having a longitudinal axis is engageable with the bone portion to connect the longitudinal member to the bone portion. A housing has a first passage configured to receive the longitudinal member. The housing has a second passage with a longitudinal axis extending transverse to the first passage. The fastener extends through an opening in the housing into the second passage and is movable relative to the housing. The longitudinal axis of the fastener is positionable in any one of a plurality of angular positions

relative to the longitudinal axis of the second passage. A spacer received in the second passage of the housing is engageable with the fastener and the longitudinal member. A member applies a force to prevent relative movement between the fastener and the housing when the longitudinal member is disengaged from the spacer and the spacer engages the fastener. The fastener and the housing are manually movable relative to each other against the force when the longitudinal member is disengaged from the spacer and the member applies the force. A clamping mechanism clamps the longitudinal member, the spacer and the housing to the fastener to prevent movement of the fastener relative to the housing.

Applicant's invention, as recited in claim 1, provides, *inter alia*, a novel feature in which "the housing and the fastener can be positioned relative to each other and the member will hold the fastener and housing in the relative positions before the longitudinal member is connected to the housing" (specification, page 2, lines 20-24). The member allows the fastener and housing to be manually movable relative to each other by a surgeon, but the member applies sufficient axial force to the spacer to prevent relative movement between the housing and the fastener without the application of such manual force (specification, page 8,

line 19 - page 9, line 4). None of the cited prior art describes or suggests an apparatus as set forth in claim 1.

U.S. Patent No. 6,485,491 to Farris et al. discloses multi-axial bone anchor assemblies, including bone anchor assembly 20 (Figs. 1-18) having a saddle member 22, a bone anchoring member 24, and a washer 26. The saddle member 22 has a channel 34 that receives a rod 36. The saddle member 22 also has a hole 38 perpendicular to channel 34 through which the anchoring member 24 extends. The anchoring member 24 is positionable in any one of a plurality of angular positions relative to the axis of the hole 38. A snap ring 28 engages a surface 83 on the washer 26 and extends into a groove 48 in the saddle member 22. In another embodiment, a non-planar snap ring 28' (Fig. 17A) may be used instead of the snap ring 28. The non-planar snap ring 28' has a series of undulations forming relative crests 129a and relative troughs 12b therein. Alternatively, the non-planar snap ring 28' could have other curved configurations, or could have extending finger-spring elements along it (column 7, lines 32-37). The Farris et al. patent also discloses a multi-axial bone anchor assembly 262 (Figs. 53-56) having a saddle member 22d, a bone anchoring member 24a, and a washer 26d. The saddle member 22d has a channel 34d that receives a rod 36. The saddle member 22d also has a hole 38d

perpendicular to channel 34d through which the anchoring member 24a extends. The anchoring member 24a is positionable in any one of a plurality of angular positions relative to the axis of the hole 38d. Snap ring 28 secures the washer 26d in the saddle member 22d. A non-planar snap ring 28' (Fig. 17A), as discussed above, may alternatively be used to secure the washer 26d in the saddle member 22d.

The Farris et al. patent does not describe or suggest a member applying a force to prevent relative movement between a fastener and a housing when a longitudinal member is disengaged from a spacer and the spacer engages the fastener. Furthermore, the Farris et al. patent does not describe or suggest a fastener and a housing being manually movable relative to each other against a force applied by a member when a longitudinal member is disengaged from a spacer and the member applies the force. Thus, claim 1 is allowable.

Claim 2 recites that the member is a compressible member. None of the cited prior art describes or suggests an apparatus as set forth in claim 2 and including all the limitations of claim 1. Therefore, claim 2 is also allowable.

Claim 3 recites that the member is a spring member engaging the housing and the spacer. None of the cited prior art describes or suggests a spring member engaging a housing

and a spacer and including all the limitations of claim 1.
Therefore, claim 3 is allowable.

Claim 4 recites that the member includes a ring member extending into a groove in the spacer and a groove in the housing. None of the cited prior art describes or suggests a ring member extending into a groove in a spacer and a groove in a housing and including all the limitations of claims 1 and 3. Thus, claim 4 is allowable.

Claim 5 recites that the ring member has a gap to permit radial contraction and radial expansion of the ring member. None of the cited prior art describes or suggests a ring member having a gap to permit radial contraction and radial expansion of the ring member and including all the limitations of claims 1, 3, and 4. Therefore, claim 5 is also allowable.

Claim 6 recites that the spacer includes axially extending slots that receive a tool for inserting the spacer and the ring member into the housing. The slots intersect the groove in the spacer to permit engagement of the tool with the spring member to radially contract the spring member into the groove in the spacer. None of the cited prior art describes or suggests a spacer having axially extending slots that receive a tool for inserting the spacer and a ring member into a housing. Also, none of the cited prior art describes or suggests axially extending slots in a spacer intersecting a

groove in the spacer to permit engagement of a tool with a spring member to radially contract the spring member into the groove. Thus, claim 6 is allowable.

Claim 7 recites that the ring member is arched when the ring member is disengaged from the housing and the spacer. None of the cited prior art describes or suggests a ring member that is arched when the ring member is disengaged from a housing and a spacer and including all the limitations of claims 1, 3, and 4. Therefore, claim 7 is also allowable.

Claim 8 recites that the fastener includes a first part spherical surface engageable with a part spherical surface of the housing. None of the cited prior art describes or suggests a fastener having a first part spherical surface engageable with a part spherical surface of a housing and including all the limitations of claim 1. Thus, claim 8 is allowable.

Claim 9 recites that the fastener includes a second part spherical surface engageable with the spacer. None of the cited prior art describes or suggests a fastener having a second part spherical surface and including all the limitations of claims 1 and 8. Therefore, claim 9 is also allowable.

Claim 10 recites that the fastener includes a surface engageable with the spacer to limit relative movement between

the fastener and the housing. None of the cited prior art describes or suggests a fastener having a surface engageable with a spacer to limit relative movement between the fastener and a housing and including all the limitations of claims 1, 8, and 9. Therefore, claim 10 is also allowable.

Claim 11 recites that the second part spherical surface has a diameter smaller than a diameter of the first part spherical surface. The surface engageable with the spacer to limit relative movement between the fastener and the housing extends between the first and second part spherical surfaces. None of the cited prior art describes or suggests a surface engageable with a spacer to limit relative movement between a fastener and a housing extending between first and second part spherical surfaces with the second part spherical surface having a diameter smaller than a diameter of the first part spherical surface and including all the limitations of claims 1 and 8-10. Thus, claim 11 is allowable.

Claim 12 recites that the spacer has an opening through which a tool extends to engage the fastener when the longitudinal member is disengaged from the spacer. None of the cited prior art describes or suggests a spacer having an opening through which a tool extends to engage a fastener when a longitudinal member is disengaged from the spacer and

including all the limitations of claim 1. Therefore, claim 12 is also allowable.

Claim 13 recites that the spacer includes slots that receive a tool for inserting the spacer into the housing. None of the cited prior art describes or suggests a spacer including slots that receive a tool for inserting the spacer into the housing. Thus, claim 13 is allowable.

Claim 14 recites that the clamping mechanism includes a threaded member threadably engageable with the housing. None of the cited prior art describes or suggests a clamping mechanism including a threaded member threadably engageable with a housing and including all the limitations of claim 1. Therefore, claim 14 is also allowable.

Claim 15 recites that the threaded member engages the longitudinal member to clamp the longitudinal member against the spacer. None of the cited prior art describes or suggests a threaded member engaging a longitudinal member to clamp the longitudinal member against a spacer and including all the limitations of claims 1 and 14. Therefore, claim 15 is allowable.

Claim 16 recites that the threaded member and the housing have a buttress thread. None of the cited prior art describes or suggests a threaded member and a housing having a buttress

thread and including all the limitations of claims 1 and 14. Thus, claim 15 is also allowable.

Claim 17 recites an apparatus including a longitudinal member connectable with a bone portion. A fastener having a longitudinal axis is engageable with the bone portion to connect the longitudinal member to the bone portion. A housing has a first passage configured to receive the longitudinal member. The housing has a second passage with a longitudinal axis extending transverse to the first passage. The fastener extends through an opening in the housing into the second passage and is movable relative to the housing. The longitudinal axis of the fastener is positionable in any one of a plurality of angular positions relative to the longitudinal axis of the second passage. A spring member applies a force to prevent relative movement between the fastener and the housing. The fastener and the housing are manually movable relative to each other against the force when the spring member applies the force. A clamping mechanism clamps the longitudinal member and the housing to the fastener to prevent movement of the fastener relative to the housing. None of the cited prior art describes or suggests an apparatus as set forth in claim 17.

As discussed above, the Farris et al. patent does not describe or suggest a spring member applying a force to

prevent relative movement between a fastener and a housing. The Farris et al. patent describes a snap ring 28' for allowing less play between a saddle member 22, anchoring member 24, and a washer 26. Furthermore, the Farris et al. patent does not describe or suggest a fastener and a housing manually movable relative to each other against a force when a spring member applies the force.

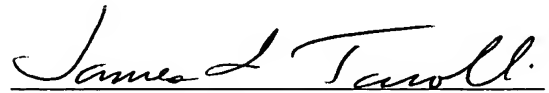
Claim 17 was rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,280,442 to Barker et al. ("Barker"). Barker discloses a multi-axial bone anchor assembly 20 (Figs. 1-18) having a receiver member 30, a bone anchor 50, and a crown member 70. The receiver member 30 has a channel 45 that receives a rod R. The receiver member 30 also has a lower aperture 35 through which the anchor 50 extends. The anchor 50 is positionable in any one of a plurality of angular positions relative to the axis of the aperture 35. A C-shaped spring or retaining member 90 prevents the anchor 50 and the crown member 70 from exiting the receiver member 30 through the lower aperture 35. The retaining member 90 engages the bone anchor 50 and extends into a groove 41 in the receiver member 30. The retaining member 90 does not apply a force to prevent relative movement between the anchor 50 and the receiver member 30 with the fastener and the housing being manually movable relative to

each other against the force when the retaining member applies the force. The retaining member 90 does not apply an axially directed force to the anchor 50 since the retaining member engages upper and lower surfaces defining the groove 41 in the receiver member 30, as seen in Fig. 7. The retaining member 90 only applies a radially outward force against the axially extending surface defining the groove 41 in the receiver member 30. Accordingly, the Barker et al. patent does not describe or suggest a spring member that applies a force to prevent relative movement between a fastener and a housing with the fastener and the housing being manually movable relative to each other against the force when the spring member applies the force. Thus, claim 17 is allowable.

In view of the foregoing, it is respectfully submitted that the above-identified application is in condition for allowance, and allowance of the above-identified application is respectfully requested.

Please charge any deficiency or credit any overpayment in
the fees for this amendment to our Deposit Account
No. 20-0090.

Respectfully submitted,



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